Commonly Asked Questions

Why do we need VPM on future VIRGINIA SSNs?
The Navy is taking action now to avoid losing over half of its undersea strike capacity when the last SSGN retires in 2028. VPM preserves sufficient strike capacity without having to build dedicated replacement SSGNs. Adding payload volume to 20 already planned SSNs sustains this critical capacity at a much lower cost.

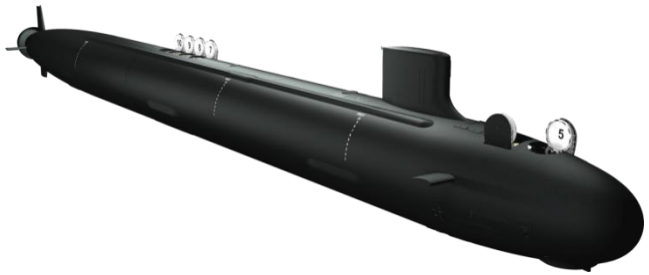
Why can't we just extend the SSGN's service life?
Extending service life further is not technically practical. SSGNs and SSBNs were designed for a 30-year service life. Based on technical evaluation of their OHIO-class design, they were extended to 42-years, well beyond the longest service life ever for a U.S. nuclear submarine.

Can additional SSBNs be converted into SSGNs to fill the undersea strike capacity gap?
No. All in-service SSBNs are required to conduct the Navy's strategic deterrence mission.

Why four large tubes on 20 SSNs?
Limiting VPM to four tubes ensures VPM SSNs retain their stealth and maneuverability. Putting VPM in 20 VIRGINIA SSNs, starting with Block V in 2019, provides undersea strike volume across the force comparable to what we have with the SSGNs.

What makes VPM a cost-effective solution?
First, it prevents the need to buy dedicated new submarines. Second, it uses proven technologies (large vertical tubes and VIRGINIA SSNs) with low technical risk. Third, the VPM payload volume has the potential to support future, capability enhancing payloads in addition to current strike weapons.

How will VPM be added to the program of record?
Adjustments to the formal VIRGINIA SSN requirements documents are in progress. Detailed design is funded in the FY13 President's Budget, enabling implementation of VPM in VIRGINIA Block V with construction starting in 2019.



"…we must act to preserve our dominance in the undersea domain by prioritizing platforms like the VIRGINIA-class submarine and its associated VIRGINIA Payload Module (VPM), as well as unmanned undersea vehicles."
– Rep. J. Randy Forbes, Chairman of the House Seapower and Projection Forces Subcommittee, Dec. 10, 2012

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VIRGINIA Payload Module (VPM)

Preserves Undersea Strike Capacity

Provides Three Times the Firepower, Three Times the Payload Volume Per Attack Submarine

Leveraging VIRGINIA's Design to Provide A Cost-Effective Force Multiplier

OPNAV N97
Undersea Warfare Division

The Navy has a critical need for undersea strike capability

The capabilities delivered by undersea forces with their assured access are even more important as potential adversaries increasingly invest in anti-access area denial (A2/AD) systems designed to impede our ships and aircraft.

Submarines can penetrate an adversary's defensive perimeter and conduct offensive operations with disproportionate military effects:

- Submarines can increase presence and warfighting capacity without provocation – on scene, but unseen
- Concealment enables attacking with surprise at the optimal time and place, maximizing effectiveness
- The submarine's assured access complicates adversary planning, creates ambiguity and fosters uncertainty – aiding deterrence

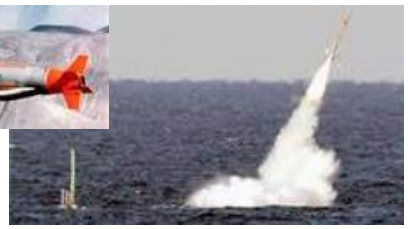
Undersea strike is important to the Joint Force:

- May be only strike available against air defenses in support of eventual joint strike ("kicking in the door")
- Surface ship payload volume is facing increasing demand for other important roles (e.g., Ballistic Missile Defense)

"A2/AD systems threaten our primary means of projecting power: our bases, our sea and air assets, and the networks that support them." **–** Wallace Gregson, Assistant Secretary of Defense for Asia and Pacific Security Affairs, Dec. 14, 2010

"*Modernizing our submarine fleet will also be critical to our efforts to maintain maritime access in these vital regions of the world. In this budget, the Navy will invest in a design that will allow new VIRGINIA class submarines to be modified to carry more cruise missiles...*" – Leon Panetta, Secretary of Defense, Jan. 26, 2012

TLAM

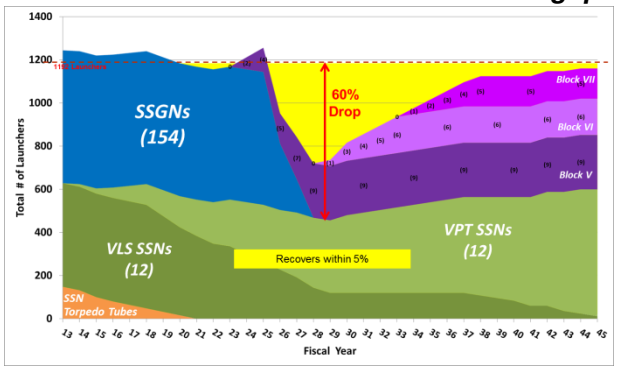


VPM closes the undersea strike gap caused by SSGN retirement

"…replace (SSGN) striking capacity with the ability to carry up to 40 precision strike cruise missiles, unmanned vehicles, or a mix of other payloads." – ADM Jonathan Greenert, Chief of Naval Operations, Nov. 14, 2012

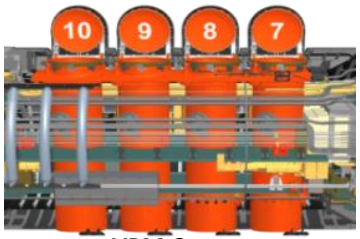
- All SSGNs will retire by 2028, reducing undersea strike capacity by 60%
- VPM development must begin in FY13 in order to deliver in Block V and address the gap
- VPM-equipped VIRGINIA-class submarines maintain SSN performance to meet all seven existing missions

20 VIRGINIAs with VPM close the strike gap



The concept design for VIRGINIA Payload Module:

- Four large tubes in a new hull section
- Uses Multiple All-up Round Canisters (MACs) already employed in SSGN & Block III VIRGINIA large bow tubes
- Seven Tomahawk cruise missiles per tube, adding 28 missiles per VPM
- Proven VIRGINIA-class construction processes



VPM Concept

VPM provides volume for potential future undersea capabilities

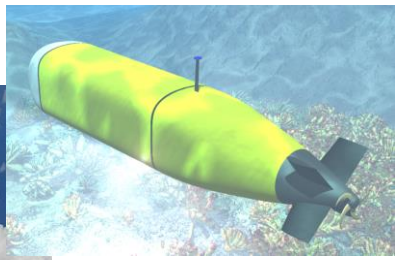
VPM preserves Special Operations Force (SOF) capacity lost with retirement of SSGNs:

- VPM provides additional volume for SOF-related purposes (command and control, berthing, etc.)
- VPM-equipped submarines may have the potential to operate with dual combat submersibles.

The design for VPM will include room to accommodate other potential future payloads:

- Time Sensitive (Prompt) strike capability
- Large Displacement Unmanned Undersea Vehicles (LDUUV)
- Open Architecture System Payloads -- employing existing Navy payloads from VPM with little modification. These payloads can hold new targets at risk from the undersea (e.g., aircraft, small fast ships, mobile land targets).

Next Generation Strike



LDUUV